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THESIS

A DETERMINATION OF THE EXTENT OF AGREEMENT
BETWEEN THE SHORE FACILITIES PLANNING DOCUMENTS
AND THE SHORE BASE READINESS REPORT

by

Joseph P. Sebunia

June 1987

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T233655

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b RESTRICTIVE MARKINGS
2a SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited
2b DECLASSIFICATION/DOWNGRADING SCHEDULE	
4 PERFORMING ORGANIZATION REPORT NUMBER(S)	5 MONITORING ORGANIZATION REPORT NUMBER(S)
6a NAME OF PERFORMING ORGANIZATION Naval Postgraduate School 6b OFFICE SYMBOL (If applicable) Code 54	7a NAME OF MONITORING ORGANIZATION Naval Postgraduate School
6c ADDRESS (City, State, and ZIP Code) Monterey, California 93943-5000	7b ADDRESS (City, State, and ZIP Code) Monterey, California 93943-5000
8a NAME OF FUNDING/SPONSORING ORGANIZATION 8b OFFICE SYMBOL (If applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c ADDRESS (City, State, and ZIP Code)	10 SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO / PROJECT NO / TASK NO / WORK UNIT ACCESSION NO

11 TITLE (Include Security Classification)
A DETERMINATION OF THE EXTENT OF AGREEMENT BETWEEN THE SHORE FACILITIES PLANNING DOCUMENTS AND THE SHORE BASE READINESS REPORT

12 PERSONAL AUTHOR(S)
Sebunia, Joseph P.

13a TYPE OF REPORT	13b TIME COVERED FROM ___ TO ___	14 DATE OF REPORT (Year Month Day)	15 PAGE COUNT
Master's Thesis		1987 June	85

16 SUPPLEMENTARY NOTATION

17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	Readiness Reporting, Facilities Planning, Military Construction, Facilities Management

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

This thesis investigates the extent of agreement between the Shore Facilities Planning Documents and the Shore Base Readiness Report. The objective is to determine if the Facility Planning Documents support the facility quantity readiness ratings reported in the BASEREP. The mean total deficiencies and the mean percentage deficiencies per facility requirement of a mission category are calculated and analyzed by analysis of variance tests to determine if there is a significant difference in the means among the assigned readiness ratings. The analysis indicates there is no significant difference in the mean deficiencies or the mean percentage deficiencies per facility requirement. The study concludes that the facilities deficiencies reported in the Facilities Planning Documents do not support the readiness ratings reported in the Shore Base Readiness Report.

20 DISTRIBUTION/AVAILABILITY OF ABSTRACT	21 ABSTRACT SECURITY CLASSIFICATION
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	Unclassified
22a NAME OF RESPONSIBLE INDIVIDUAL Professor Stephen L. Mehay	22b TELEPHONE (Include Area Code) 408-646-2643 / 22c OFFICE SYMBOL Code 54Mp

Approved for public release; distribution is unlimited.

A Determination of the Extent of Agreement Between the Shore Facilities Planning Documents and the Shore Base Readiness Report

by

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MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
June 1987

ABSTRACT

This thesis investigates the extent of agreement between the Shore Facilities Planning Documents and the Shore Base Readiness Report. The objective is to determine if the Facility Planning Documents support the facility quantity readiness ratings reported in the BASEREP. The mean total deficiencies and the mean percentage deficiencies per facility requirement of a mission category are calculated and analyzed by analysis of variance tests to determine if there is a significant difference in the means among the assigned readiness ratings. The analysis indicates there is no significant difference in the mean deficiencies or the mean percentage deficiencies per facility requirement. The study concludes that the facilities deficiencies reported in the Facilities Planning Documents do not support the readiness ratings reported in the Shore Base Readiness Report.

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I. INTRODUCTION

This thesis is an investigative study intended to determine the extent of correlation between the Facility Planning Documents (FPD) and that portion of the Shore Base Readiness Report (BASEREP) that assesses facilities quantity. The Facility Planning Documents provide a record of planning data for an activity. This data includes the quantity of deficient facilities for each mission performed at an activity. The BASEREP assesses facilities assets with respect to mission readiness by assigning a facility quantity readiness rating. Since aspects of the FPD and the BASEREP both address the sufficiency of the quantity of facilities, a finding of a significant positive correlation between the two documents would enhance the credibility of requests for resources based on these differing reports.

A. BACKGROUND

The Navy's shore facilities are acquired primarily via the Military Construction (MILCON) Program. The MILCON program is one of the final products of the Navy's Shore Facilities Planning System (SFPS). Based on results of the planning process, alternatives such as conversions of existing facilities or leases may be proposed as substitutes for new construction.

In recent years the competition for resources such as the MILCON appropriation has intensified. In the wake of legislation such as the Graham-Rudman-Hollings amendment, all appropriations have become candidates for drastic cuts in program level. It is apparent that only the most adequately justified programs will survive the rigorous scrutinies of the constrained fiscal environment.

The Navy in particular has been trying to strengthen its justification for resources by attempting to tie shore facilities assets (i.e. facilities, manpower, and equipment) to readiness posture [Ref. 1]. The source for the readiness posture data is the BASEREP. Research to date in the facility condition category indicates that the readiness posture data provided by the BASEREP is not reliable for a number of reasons [Ref. 2: pp. 6-7]. The CNO has consequently directed the 1987 goal of improving the consistency, objectivity, and credibility of BASEREP reports [Ref. 2: p. 1]. The methodology proposed for improving the BASEREP is to incorporate extensive objective criteria for determining the facilities condition readiness rating [Ref. 3: p. 9].

A parallel situation exists in the asset category of facility quantity. In this case the FPD's provide a direct objective measurement of facilities quantity, to be compared with the BASEREP readiness rating. If a positive correlation can be established between the two documents, justification of resource requests will be enhanced and expenses for upgrading the BASEREP in this area may be avoided.

The Navy Shore Facility Planning System was developed to determine facility requirements necessary for the accomplishment of assigned missions and to assure optimum utilization of existing assets at shore activities [Ref. 4: p. I-1]. The SFPS lists quantified facility deficiencies for each assigned mission category. By judiciously assessing facility impact on mission accomplishment, realistic programs and budgets are developed for each Navy activity. While present and future mission accomplishment is considered with the SFPS, a mission readiness assessment is not made.

The BASEREP also assesses facility quantity. The BASEREP is a mission oriented system for assessing shore base readiness. It uses a two-dimensional matrix format, based on assets and missions. A readiness rating is assigned to each relevant mission category and each asset. Of the three asset categories, (personnel, facilities, and equipment) only the facility quantity category is of interest to this study.

B. OBJECTIVE AND SCOPE

This thesis is an examination of the FPD's and the BASEREP to determine the extent of correlation between the two documents. In particular, a determination is made of whether the FPD supports the BASEREP ratings on facility quantity. Since considerable effort is contemplated on improving the reliability of the BASEREP, a strong correlation between the two reports would enhance the credibility of the existing BASEREP data in this area and may eliminate the need for further expense on BASEREP improvement. Also, resource justification based on strongly correlated data would tend to be more favorably supported.

The scope of the research is confined to the FPD and the BASEREP for selected activities in the Western Region. This limitation is due to time and distance considerations. Fiscal year 1986 BASEREP reports and the current FPD summary reports are examined to the extent of the availability of those reports.

C. RESEARCH QUESTION

The specific research question of this study is:

Do the facility quantity deficiencies reported in the Facility Planning Documents support the facility quantity readiness ratings reported in the Shore Base Readiness Report?

D. RESEARCH METHODOLOGY

Background information on the FPD and the BASEREP was obtained from literature review, telephone interviews, and from the author's prior experience in shore facilities management. The specific research data on the BASEREP was provided by the Naval Facilities Engineering Command (NAVFAC), and the data on the FPD by the selected activities and the Western Division, Naval Facilities Engineering Command (WESTDIV).

Prior research on the BASEREP category of facility condition has been conducted by Jones [Ref. 5: pp. 9-10]. This thesis will follow the methodology developed in that study for the facility quantity category. Taken together, the two studies will provide the correlation evidence for the asset category of facilities in the BASEREP.

The following items from the FPD were developed for analysis for each mission category of the BASEREP:

1. Total quantity of facility deficiency;
2. Percentage of total quantity of facility deficiency per total quantity of facility requirement.

This approach deviates from the methodology developed by Jones in that the direct objective data will be analyzed in addition to the surrogate of percentage deficiency per total requirement. By analyzing both aspects of facility quantity deficiencies, the present study attempts to gain insight into the specific rationale used by the activity in assessing facility quantity readiness.

The mean value of each activity's total deficiency, and percentages of deficiency per total requirement were calculated for each facility quantity readiness rating. A statistical analysis of this data was performed. The null hypothesis is that the mean value of facilities deficiencies, or the percentage of deficiencies per total requirement, for each facility readiness rating is equal. An Analysis of Variance (ANOVA) test was performed to prove or disprove the null hypothesis. If the ANOVA test fails to reject the null hypothesis, it can be concluded that the FPD data do not support the facility quantity readiness ratings of the BASEREP.

E. DEFINITIONS AND EXPLANATIONS OF KEY TERMS

The following are definitions and explanations of key terms used in this thesis:

1. ADEQUATE - a facility fully capable of supporting its current use without modifications or repairs which require approval and funding beyond the authority of the Commanding Officer. [Ref. 4: p. A-1]
2. ASSET SPECIFIC RATING - Readiness rating from 1 through 4 that assesses an asset in terms of its ability to meet the demands of a mission category. [Ref. 3: p. 2]
3. BASEREP - Shore Base Readiness Report.
4. BASIC FACILITY REQUIREMENTS (BFR) - the term used for the aggregate facility requirements, listed by category code and quantity, which are necessary to perform an activity's mission. [Ref. 4: p. A-2]
5. CATEGORY CODE - a numeric code used to identify a particular type of Navy or Marine Corps Class II real property (i.e., building, structure, utility). [Ref. 6]
6. FACILITIES REQUIREMENTS PLAN SUMMARY (FRP) - a document providing a concise overview, by category code, of Basic Facility Requirements; existing deficiencies and surpluses; and deficiencies and surpluses that would remain after implementation of the actions associated with the Facility Planning Document.
7. FACILITY DEFICIENCY - the quantitative difference in terms of some unit of measure between a stated requirement for a facility and the adequate assets available for the satisfaction of that requirement. (Deficiency = Requirement - Adequate - Other). [Ref. 4: p. A-3]
8. FACILITY PLANNING DOCUMENT (FPD) - the complete record of planning information for a single category code, including requirements and assets information, deficient and surplus quantities for the category, buildings included in the category, proposed planning actions to satisfy deficiencies and eliminate surpluses, and notes providing further descriptive information. [Ref. 4: p. A-3]
9. INADEQUATE - a facility that cannot be made adequate for its present use through "economically justifiable means". [Ref. 4: p. A-4]
10. MILCON - Military Construction.
11. NAVAL SHORE ACTIVITY - a naval activity on shore, established by the Secretary of the Navy, or in some cases by the Chief of Naval Operations. [Ref. 4: p. A-4]
12. SHORE FACILITIES PLANNING SYSTEM (SFPS) - that process that involves the determination of the facility requirements for individual shore activities of the Navy establishment, the evaluation of the adequacy of existing real property to satisfy these requirements, the determination of facility

deficiencies or excesses, the provision for maximum utilization of existing facilities, the translation of deficiencies into requirements for construction, and the initiation of disposal action of excess properties. [Ref. 4: p. A-7]

13. SUBSTANDARD - a facility with deficiencies that require approval and funding beyond the authority of the Commanding Officer for modification or repairs to make the facility adequate for its function. [Ref. 4: p. A-7]
14. NAVFAC PUBLICATION 72 (P-72) - establishes the category codes, nomenclature, facility type, and required units of measure for identifying, classifying and quantifying Navy facility requirements and assets.
15. NAVFAC PUBLICATION 80 (P-80) - provides the specific planning factor criteria for determining the facility requirements for each category code.

F. THESIS ORGANIZATION

Chapter II describes the Facility Planning Documents and the BASEREP to familiarize the reader with their organization and format. Chapter III describes the data collection procedure and the process used to restructure the FPD data. Chapter IV presents the results of the data analysis and the interpretation of the results. Chapter V presents the summary, conclusions and recommendations.

II. FACILITY QUANTITY REPORTS DESCRIPTION

The Facility Planning Documents and the Shore Base Readiness Report are documents peculiar to the shore establishment. As the reader may be unfamiliar with the purpose and format of these reports, a brief description is provided.

A. FACILITY PLANNING DOCUMENTS

The Facility Planning Documents (FPD) are used by an activity to satisfy facility deficiencies and to dispose of surplus facilities. They are developed by the activity with the assistance of the Naval Facilities Engineering Command regional field offices. A separate planning document is developed for each function performed by a shore activity. Each function is described by a specific category code, as defined in the NAVFAC P-72.

The planning document is the result of the concise and logical process known as the Shore Facility Planning System (SFPS). The SFPS consists of the following steps: [Ref. 4: pp. I1-I2]

1. Defintion of the future mission of the activity, usually 5-8 years ahead;
2. Expression of the activity missions in terms of base loading, i.e., personnel, ships, aircraft, etc.;
3. Determination of specific facility requirements to support base loading for mission performance;
4. Comparison of facility requirements with existing assets and development of facility planning documents;
5. Execution of acquisition or disposal plans.

The FPD then becomes a key document in developing a justification for the acquisition of facilities via the MILCON program. It contains the quantifiable objective planning data used to support facility project development.

The planning process is designed to be dynamic and continually receptive to mission changes. Due to the length of time required for advance planning, and the complexity of the process, major formal changes to the FPD occur every 3-5 years, during the revisions to the activity Master Plan. For the purpose of this thesis, the latest FPD's for selected activities will be compared to the latest BASEREPS for the corresponding activity.

The typical FPD is divided into four sections:

1. activity name, category code, and description;

2. facility requirements and asset data summary;
3. detailed facility data;
4. optional notes section.

The first section of the FPD contains the Unit Identification Code (UIC) and the name of the activity, any special area code and name for that activity, the category code and description of the function performed, the date the facility requirement was entered, the date of the latest change to the FPD, and the date of the Engineering Field Division (EFD) certification.

The second section contains the primary information to be used in this thesis: the Basic Facility Requirement in both a primary and alternate unit of measure, the amount of adequate, substandard and inadequate facility assets, and the quantity of deficient and surplus assets for the particular category code. The relevant data in this section is concisely displayed in the Facility Requirements Plan Summary Report (FRP). The FRP was the source document for the facility quantity deficiency data used in this thesis. An excerpt from a typical FRP is included as Appendix A.

The third and fourth sections of the FPD provide details of the summary data displayed in the second section and any amplifying or explanatory notes pertaining to the summary data.

B. THE SHORE BASE READINESS REPORT (BASEREP)

The BASEREP assesses the readiness of Navy shore activities in the area of Base Operating Support (BOS) and training [Ref. 3: p. 1]. The approach taken in the BASEREP is to develop a mission-oriented system for measuring shore base readiness and workload variables. The readiness ratings are analyzed at headquarter levels and used to support and defend funding requests in the programming and budgeting process. The report is similar to the condition reports used by the operating commanders to apprise seniors of individual unit status and condition.

The report is structured along two dimensions, asset categories and mission categories. The asset categories include personnel; facility quantity and condition; and major equipment quantity and condition. As the purpose of this thesis is to determine if correlation exists between the FPD and the BASEREP ratings, only the facility quantity asset category is of interest.

There are 23 mission categories in the second dimension. These are aligned around the relevant categorizations used by the Navy in managing the shore establishment to specify as clearly as possible the content of each mission category. Appendix B lists the BASEREP mission categories.

The BASEREP requires the Commanding Officer to assign annual readiness ratings, called Asset Specific Ratings, for relevant assets in each mission category. The ratings relate to how well each asset has met the specific demands of a mission category. An overall mission readiness rating is not provided. The readiness ratings are represented by the numerals 1 through 4 and are explained in Appendix C. A representative BASEREP is provided as Appendix D.

The facility quantity readiness rating should reflect the size and number of facilities and structures available to meet the mission demands. It should be supported by the deficiencies listed in the FPD, but should not be equated with a specific financial amount of deficiencies. [Ref. 3: p. 3-8]

C. SUMMARY

This chapter described the Facility Planning Documents and the Shore Base Readiness Report which are used in this thesis. The FPD is a detailed document defining: (1) the quantity of facilities deficiencies and excesses for a given category code; and (2) a plan of action for eliminating these deficiencies or excesses. The BASEREP is a report that assesses mission readiness of three specific assets in 23 mission categories. A readiness rating of 1 through 4 is assigned to relevant assets in each of the mission categories.

III. DATA COLLECTION AND RESTRUCTURE

This chapter briefly describes the data collection process and the method of obtaining compatibility of the data from the FPD and the BASEREP. Since the FPD's are structured along facility category codes and the BASEREP is structured along mission categories, it was necessary to ensure that the data collected were structured along the same parameter for comparison (i.e., either category code or mission category). The data was structured along the BASEREP mission categories for conveniencs and to provide comatibility of the analysis with that conducted by Jones. Therefore, only the FPD data needed to be restructured.

A. DATA COLLECTION

Twenty Naval activities in the Western region of the United States were randomly selected as subjects. These activities represented 13.3% of the participants that are required to submit a BASEREP. Appendix E contains a list of the twenty activities selected for this study. The list contains representatives from the major operational commands as well as from the training command and other staff and systems commands.

The Facilities Planning Division of the Western Division, Naval Facilities Engineering Command, provided copies of the Facilities Requirements Plan Summaries for each of the selected activities. The Facilities Management Division of the Naval Facilities Engineering Command provided the copies of the BASEREP for the same activities for the Fiscal Year 1986. Only the current documents could be compared as the FPD data is continually updated and prior information is not maintained in the shore facilities planning system.

B. DATA RESTRUCTURE

The BASEREP data is presented by mission category, and no restructuring of the data was necessary.

The FPD data is presented by facility category code in numerical sequence (refer to the sample FRP in Appendix A). Each BASEREP mission category is composed of a specific set of facility category codes. In order to make the two reports compatible, the FPD data was related to the mission category by these sets of category codes.

Appendix F provides the relationship between the FPD category codes and the BASEREP mission categories. This relationship was used to restructure the FPD deficiency data and the Basic FacilityRequirements (BFR) data along the BASEREP missions.

C. SUMMARY

This chapter described the data collection methods and the process used to restructure the FPD data. The research data base was obtained from 20 Navy shore activities in the Western United States, representing 13.3% of the designated BASEREP reporting activities. The commonality between the FPD deficiencies and the BASEREP missions is the facility category code. The FPD deficiencies and the BFR for each activity had to be restructured along the mission operations categories.

IV. DATA ANALYSIS AND INTERPRETATION

This chapter presents the data analysis and interpretation of results. The Analysis of Variance (ANOVA) test was performed on the data and the test results are provided. A sample ANOVA test is included for the reader to observe the test.

A. DATA

The data collection and restructuring process was described above in Chapter III. The sources of the data were the BASEREP and the FRP summary report. The FRP data was restructured along the BASEREP mission categories to allow a consistent analysis of the data. Table 1 contains a sample of the restructured data for a typical activity. The rows are the mission categories from the BASEREP. The columns are described as follows:

1. MISSION CATEGORY - The baserep mission category.
2. READINESS RATING - The facility quantity readiness rating as reported in the BASEREP. Blank lines represent mission categories for which no readiness rating was reported. The researcher included these blank mission categories in the analysis when necessary as a readiness rating of (5).
3. DEFICIENCY - The total (in square footage) deficiencies for each mission category as reported in the FRP summary report.
4. BASIC REQUIREMENT - The total basic facility requirement for each mission category as reported in the FRP summary report.
5. % DEF / BFR - The percentage of total deficiencies per total basic facility requirement for each mission category.

Appendix G contains the complete set of data, restructured along the mission categories, that was included in the analysis. This data is not yet in the final format for analysis and must be subject to further refinement and adjustment as discussed below.

An examination of the data in Table 1 and Appendix G reveals some mission categories that will be excluded from the analysis. The reasons for their exclusions are as follows:

1. Several mission categories contained facility assets which are defined by incompatible units of measure. The researcher used square feet (SF) as the primary unit of measure as it occurred most frequently among the facility asset categories. Whenever the facility assets could not be reconciled for the mission category along compatible units of measure, these categories were marked with an "I" in the respective columns.

TABLE 1

RESTRUCTURED DATA SAMPLE

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	3	I	I	I
FLT COMS	3	1580	2218	71.2
PORT OPS	3	I	I	I
SPEC OPS	3	16915	28120	60.2
TRAINING	3	2950	5900	50.0
ACFT MNT	2	93048	182731	50.9
SHIP MNT	4	4940	4940	100.0
ELEX/LOG	3	4646	7420	62.6
RDTE	---	---	---	---
POL SVCS	3	I	I	43.8
WPN SVCS	3	36106	51950	69.5
MED/DENT	2	1138	1138	100.0
UPH/MESS	3	I	I	I
PERS SVC	2	159484	332600	48.0
FAM HSNG	3	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	2	17917	45021	39.8
PUB WRKS	2	I	I	I
SECURITY	2	3920	4070	96.3
FIR PROT	3	I	I	I
BASE TRN	2	I	I	I
BASE COM	2	2204	2204	100.0
SUP SVCS	3	99926	253932	39.4

2. All mission categories rated with a zero BFR will be excluded also. A zero BFR gives an indeterminate percentage deficiencies per BFR.
3. The family housing and utility operations assets are not listed on the FRP summary report. Therefore, the deficiencies and percentage deficiencies per BFR cannot be calculated and are not listed.
4. The POL products and services and the berthing and messing mission categories listed the assets consistently within their respective categories but in units of measure incompatible with the other mission categories. Consequently, only a percentage deficiencies per BFR is provided for these mission categories.

Table 2 shows the results of omitting the unusable data elements from the sample. Appendix H contains all the data after exclusion of the unusable categories, and was the final data base used for performing the ANOVA tests.

TABLE 2
ANOVA TEST DATA BASE SAMPLE

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
ACFT MNT	2	93048	182731	50.9
MED/DENT	2	1138	1138	100.0
PERS SVC	2	159484	332600	48.0
ADMIN	2	17917	45021	39.8
SECURITY	2	3920	4070	96.3
BASE COM	2	2204	2204	100.0
FLT COMM	3	1580	2218	71.2
SPEC OPS	3	16915	28120	60.2
TRAINING	3	2950	5900	50.0
ELEX/LOG	3	4646	7420	62.6
POL SVCS	3	---	---	43.8
WPNS SVC	3	36106	51960	69.5
SUP SVCS	3	99926	253932	39.4
SHIP MNT	4	4940	4940	100.0

It was noted that the exclusion actions rendered approximately 30% of the readiness ratings data unusable in the tests for the variable percentage deficiency per

BFR (%DEF BFR) and approximately 50% of the ratings data unusable in the tests for total deficiencies. Of particular concern was the loss of many of the operational mission category ratings, as these contained the majority of the incompatible units of measure. Many of these data elements might have been retained, but only at the risk of further manipulation of the data base. The analysis was conducted under the principle that minimal modifications and assumptions would be made in order to permit rapid adaptation of the results if some consistency of information was identified.

The data tested had five readiness ratings: 1,2,3,4 and 5. Readiness ratings 1,2,3 and 4 are valid ratings in that they are identified and defined in the BASEREP. The valid rating definitions are presented in Appendix C. One other readiness rating (5) that is included in the test has been defined as follows:

- 5 - Unassigned readiness rating for mission categories that have a BFR and assets listed on the FRP summary report. This category is used when activities did not assign a readiness rating, although there is a BFR and facility assets assigned for that mission category.

The unassigned readiness ratngs added 89 data elements to the data base. This amounted to an increase of 50% for each sample when all ratings were tested.

B. DATA ANALYSIS

The Analysis of Variance (ANOVA) test was run on the data in Appendix H to determine if the mean total facilities deficiencies and/or the mean percentage of deficiencies per basic facility requirement (BFR) differ significantly among the various assigned readiness ratings. Two ANOVA tests were performed on the data, one test using only the valid ratings (1,2,3 and 4) assigned by the activity, and another using all the assigned ratings (1,2,3,4 and 5). The reason for performing these two separate tests was to establish whether the readiness rating assigned by the researcher (5) had an impact on the test results. These two tests were run for each individual sample and for the entire sample combined for these two categories:

1. Total facilities deficiencies (in square footage);
2. Percentage total facilities deficiencies per total basic facility requirement.

1. An Illustrative Example

The following example is provided as an illustration of the ANOVA test procedure:

a. ANOVA test for the equality of L group means

- Null Hypothesis (Ho): All group means are equal.
- Alternate Hypothesis (Ha): Not all means are equal.
- Test Statisic (F): MEAN SQUARES (BETWEEN GROUPS) / MEAN SQUARES (WITHIN GROUPS).
- Rejection Region: Reject the null hypothesis if the test statistic F is greater than F (a = .05, DF1 = L, DF2 = N-L).
- a = .05 is the maximum tolerable risk of rejecting the null hypothesis if it is true.
- L = number of groups.
- N = total sample size.
- DF1 = degrees of freedom in the numerator.
- DF2 = degrees of freedom in the denominator.

Table 3 presents the data for percentage total deficiencies per BFR (%DEF/BFR) for four readiness ratings for a typical activity. The ANOVA test was performed to test the hypothesis that the mean value of the variable (%DEF/BFR) for each of the readiness ratings are equal.

TABLE 3
EXAMPLE DATA TABLE

READINESS RATING	%DEFICIENCY /REQUIREMENT					GROUP MEAN	GROUP SIZE
1	0.00					0.00	1
2	0.00	20.1	61.4	16.6		24.52	4
3	55.5	47.7	51.5	0.00	29.5	36.7	5
5	3.00	0.00	39.5			14.7	3

- Number of groups = L = 4.
- Total sample size = N = 13.
- F statistic = .98
- DF1 = L-1 = 4-1 = 3
- DF2 = N-L = 13-4 = 9

Critical value for F (.05, 3, 9) = 3.86 [Ref. 7: p. 752]

Ho: All group means are equal.

Rejection region: Reject Ho if F is greater than 3.86.

Conclusion: F = .98 is below the critical value 3.86, therefore it is concluded that the mean values of the percentage deficiencies per BFR for each readiness rating are not significantly diferent.

C. TEST RESULTS

Table 4 summarizes the test results for the total deficiencies (in square footage). Seventy-eight percent (14 out of 18) of the tests performed for the individual samples of valid ratings indicated there is no significant difference among the mean total deficiencies of the assigned readiness ratings. The other four tests indicated there is a significant difference in the mean total deficiencies. Each of these tests had high means in one of the readiness ratings relative to the others. Statistically, these means can be categorized as outlyers, rendering the sample invalid. ANOVA tests were run on these samples with the outlyers deleted. Usually the outlyers were single value entries. The second tests indicated no significant difference in the means for each of these tests.

Sixty-eight percent (13 out of 19) of the tests performed using all five of the readiness ratings indicated that there is no significant difference in the mean value of the deficiencies. Four of the six tests indicating a significant difference were for the same sample numbers in the valid ratings only test. Each of these tests had unusually high means in one of the readiness ratings relative to the others, as indicated above, after the additional rating was considered in the analysis. The effect of these outlyers renders the samples invalid. The other two remaining positive results also contained relatively high means in one of the readiness ratings. These means can also be categorized as outlyers and the samples rendered invalid. The two tests run on the combined data sample indicated that there is no significant difference in the means.

Table 5 provides the test results for the percentage deficiencies per BFR (%DEF/BFR). For the individual samples when only the valid ratings were considered, ninety-five percent (18 out of 19) of the tests indicated there is no significant difference in the mean percentages. The remaining test indicated a significant difference in the mean (%DEF/BFR). Examination of the data sample indicated that one of the means had an extremely low value in readiness category 1 relative to the other ratings. Because of the effect of this outlyer, it was concluded that the sample was invalid.

TABLE 4

ANOVA TEST RESULTS OF TOTAL DEFICIENCIES (SF)

SAMP #	MEAN DEFICIENCIES (SF) 1	2	3	4	5	RESULTS V	A
1	1441	158163	40690	NA	36197	N	N
2	107368	175367	4950	NA	10375	N	N
3	1832228	208638	NA	NA	4050	Y	Y
4	NA	3000722	170617	44000	54653	N	N
5	0	86608	157	NA	2000	N	N
6	NA	34185	11500	0	4526	N	N
7	457321	42886	102788	NA	5437	Y	Y
8	NA	483242	104031	NA	69447	N	N
9	NA	15882	NA	NA	8007	NONE	N
10	NA	27900	441162	16918	2976	N	N
11	NA	46285	27020	4940	NA	N	NONE
12	0	59339	56447	NA	219	N	N
13	NA	275078	173844	1387552	20355	N	Y
14	7025	8075	NA	NA	2800	N	N
15	10913	185898	NA	NA	2289	Y	Y
16	17289	322480	4671335	NA	15745	Y	Y
17	311144	22311	NA	NA	35847	N	Y
18	16410	16163	NA	NA	700	N	N
19	1656838	8950	63399	NA	8533	N	N
20	NA	228258	NA	NA	904	NONE	N
COMB	288993	212370	246523	290682	19604	N	N

V = results of test with ratings 1-4 mean total deficiencies.

A = results of test with ratings 1-5 mean total deficiencies.

Y = there is a significant difference in the mean total deficiencies.

N = there is no significant difference in the mean total deficiencies.

NONE = no test was run due to insufficient data elements.

The test results for the samples with all ratings used indicated that approximately ninety percent (17 out of 19) of the samples showed no significant difference in the mean (%DEF/BFR). Analysis of the sample data again indicated that one sample contained a relatively low mean in the readiness category 5, and one sample contained a high mean in readiness category 5. The presence of these outlyers renders these samples invalid.

The test result for the combined data using all five readiness ratings indicated that there is a significant difference in the means. However, when only the valid ratings were tested, the results indicate no significant difference in the mean percentage deficiencies per requirement.

D. INTERPRETATION OF RESULTS

The specific issue that this thesis set out to address is: Do the facilities deficiency data reported in the Shore Facility Planning Documents support the facility quantity readiness ratings reported in the Shore Base Readiness Report? As the researcher tried to gain some insight as to how individual base commanders assessed mission category readiness, both the total deficiencies and a surrogate were used in the analysis to answer the research question. The surrogate was percentage deficiencies per basic facilities requirement and was used because facilities deficiencies vary in size and units of measure for each mission category. Both the total deficiencies and the ratio of total deficiencies to total facilities requirements were calculated for each mission category and then grouped by readiness rating. The mean deficiencies and mean (%DEF BFR) for each readiness rating were calculated and ANOVA tests run to determine if there was a significant difference in the mean values among the different readiness ratings. The tests were performed when the four valid ratings (1-4) were considered and when all five (1-5) of the readiness ratings were considered. Table 6 provides a summary of those test results.

The test results for the individual samples using only the valid ratings (1-4) indicated 78% of the means for total deficiencies and 95% of the means for (%DEF/BFR) showed there is no significant difference in the mean values among the assigned readiness ratings. This is an average of 86% for the two tests, high enough to infer that there is no significant difference in the means for total deficiencies and the surrogate of (%DEF/BFR) for the different readiness ratings. Thus, it can be concluded that the Facilities Planning Documents deficiency data for individual samples do not support the BASEREP facility quantity readiness ratings.

TABLE 5

ANOVA TEST RESULTS OF (%DEF/BFR)

SAMP #	MEAN (%DEFICIENCIES/REQUIREMENT) 1	2	3	4	5	TEST RESULTS VALID	ALL
1	26.1	59.3	51.6	NA	46.6	N	N
2	86.9	88.4	100.0	NA	60.6	N	Y
3	58.6	52.7	NA	NA	100.0	N	N
4	6.7	99.5	93.8	100.0	84.7	Y	N
5	0.0	60.3	24.6	NA	100.0	N	N
6	2.7	27.6	47.6	0.0	47.9	N	N
7	42.0	26.9	29.1	NA	39.7	N	N
8	NA	58.4	64.5	99.5	73.3	N	N
9	NA	31.0	36.2	NA	89.2	N	Y
10	NA	39.8	69.0	96.7	38.8	N	N
11	NA	72.5	56.7	100.0	NA	N	NONE
12	0.0	24.5	36.7	NA	14.7	N	N
13	NA	88.8	99.0	71.6	82.1	N	N
14	43.7	100.0	NA	NA	98.7	N	N
15	28.8	38.0	NA	NA	42.1	N	N
16	41.9	66.3	41.6	NA	34.6	N	N
17	95.0	58.7	NA	NA	76.1	N	N
18	56.2	50.1	NA	NA	66.7	N	N
19	69.5	64.3	63.3	NA	88.3	N	N
20	NA	16.6	NA	NA	52.1	NONE	N
COMB	44.8	52.5	60.7	77.1	63.9	N	Y

Valid = results of test with ratings 1-4 for mean (%DEF/BFR).

All = results of test with ratings 1-5 for mean (%DEF/BFR).

Y = there is a significant difference in the mean (%DEF/BFR).

N = there is no significant difference in the mean (%DEF/BFR).

NONE = no test was run due to insufficient data elements.

TABLE 6

TEST RESULTS SUMMARY

TYPE SAMPLES	INDIVIDUAL SAMPLE % NO SIG DIFF	COMBINED SAMPLE SIG DIFF
TOTAL DEFICIENCIES (SF)		
VALID RATINGS	77.8	NO
ALL RATINGS	68.4	NO
% DEFICIENCIES /REQUIREMENT		
VALID RATINGS	94.7	NO
All RATINGS	89.5	YES

Total Deficiencies (SF) = total deficiencies in square footage.

%Deficiencies Requirement = percentage of total deficiencies per total requirement.

SIG DIFF = significant difference in the means.

NO = there is no sgnificant difference in the means for the different ratings.

YES = there is a significant difference in the means for the different readiness ratings.

The test performed for all ratings included an additional rating defined by the researcher (5). This rating is not a valid rating in that it is not defined in the BASEREP. Since there was no way of knowing which valid rating to assign to these mission category assets, the data was grouped in a separate category. This category was considered potentially important as it contained the largest number of data elements in both the total deficiencies and the (%DEF/BFR) samples. Although the validity of this category is questionable, the test using this category was performed and analyzed. The test results showed an increase in the percentage of samples indicating a significant difference in the means when including this additional rating. However, the results do not alter the overall conclusion that the FPD deficiencies do not support the BASEREP readiness ratings.

The test results of individual samples using all of the readiness ratings indicated 68% of the mean total deficiencies and 90% of the mean (%DEF/BFR) showed there is no significant difference in the mean values among the different readiness ratings. This is an average of 79% of both samples, and high enough to infer that there is no statistical significance in the mean values of the assigned readines ratings. Again, it can be concluded that the FPD deficiencies data for individual samples, considering all assigned readiness ratings do not support the BASEREP readiness ratings for facility quantity.

When the combined sample data was tested, the results indicated no significant difference in the mean total deficiencies and (%DEF/BFR) for the valid ratings, and in the mean total deficiencies for all five ratings. However, the test indicated a significant difference in the mean (%DEF/BFR) when all five readiness ratings were included. An examination of the data for readiness rating (5) used in this test showed that the sample distribution was non-normal, with the data exhibiting heavy tails. Approximately one half of the data elements were extreme values (either 0% or 100%). This sample violates the normal population assumption used in ANOVA test and renders the outcome questionable.

The test results statistically imply (in all cases except one) that there is no significant difference among the mean FPD deficiencies in each of the assigned readiness ratings. Therefore, it is concluded that the Facilities Planning Documents deficiency data do not support the facility quantity readiness ratings reported in the BASEREP.

E. SUMMARY

This chapter presented the data analysis process and interpreted the results of that analysis. The test results infer that there is no significant difference among the mean total deficiencies or among the mean percentage deficiencies per requirement in each of the assigned readiness ratings. The conclusion drawn was that the Facilities Planning Documents do not support the facility quantity readiness ratings reported in the BASEREP.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATION

The objective of this thesis was to investigate the Facilities Planning Documents and the Shore Base Readiness Report to determine if the FPD deficiencies support the BASEREP facility quantity readiness ratings. The FPD is a detailed report containing the objective planning data used to support facility project development. It provides the basic facility requirements, the amount of adequate, substandard and inadequate facility assets, and the quantity of surplus or deficient assets by individual category code. The BASEREP is a mission oriented report for assessing shore base readiness. It is structured along two dimensions: Assets and Missions. The BASEREP provides for a facilities quantity readiness rating along the 23 mission categories relevant to an activity.

Copies of both the current Facilities Requirements Plan Summary Reports and the Fiscal Year 1986 BASEREPS were obtained for 20 naval shore activities in the Western region of the United States for individual and group comparisons. The BASEREP mission categories were used as the common comparative medium and the FPD data was restructured along the mission categories.

The total deficiencies (in square footage) and a surrogate consisting of the ratio of the deficiencies to the total facility requirements were calculated for each activity mission category. An Analysis of Variance test was performed on the data using the mean values of the deficiencies and the surrogate to determine if the means were equal among the different readiness ratings. The null hypothesis was that the mean value of the deficiencies, and the mean value of the percentage deficiencies per BFR for each assigned readiness rating are equal.

Approximately 30% of the valid mission categories were excluded from the ANOVA tests because there were incompatible units of measure defining the facilities within the mission categories, or because no BFR was listed for a mission category rated by an activity.

The ANOVA tests were performed on the individual and combined data samples usuing the valid readiness ratings (1,2,3,4) and using an additional rating (5) to incorporate potentially important assets not rated by the activity. The validity of the tests using all five of the ratings is questionable because one of the ratings (5) was not defined by the BASEREP.

The ANOVA tests generally indicated that there is no significant difference in the mean deficiencies or the mean percentage deficiencies per BFR among the assigned readiness ratings. Based upon the analysis of the ANOVA test results, it was concluded that the facilities deficiencies reported in the Facilities Planning Documents do not support the BASEREP facilities quantity readiness ratings.

A. RECOMMENDATION AND FURTHER RESEARCH RESEARCH EFFORTS

The conclusion drawn from the study that the FPD data do not support the BASEREP facility quantity readiness ratings is similar to that drawn in an earlier study by Jones for facilities condition [Ref. 5: p. 35]. Adoption of objective criteria for determining the facilities condition category readiness ratings is being considered. It is recommended that objective criteria for the facility quantity category be developed and adopted to improve the usefulness of the BASEREP information. Based on the problems encountered in this study with the loss of data elements due to incompatible units of measure, the criteria developed should focus on a surrogate similar to that used in this thesis (% DEF/BFR), rather than a direct measure of the facilities deficiencies.

Some alternative approaches to the development of the data base became apparent to the researcher during the course of the study and are offered for those interested in continuing research in this area:

1. Since many of the valid ratings were lost (30%-50%) due to incompatible units of measure, additional research should consider using one primary type of facility (e.g., the largest or most representative) for describing that mission category.
2. Deficiencies for the FPD are determined by the formula:

   Deficiency = Requirement - Adequate assets - Other assets.

   Since substandard deficiencies could be corrected by other appropriations besides the MILCON appropriation, such as O&MN, substandard assets could be added to the computation and the deficiencies recomputed as:

   Deficiency = Requirement - Adequate assets - Substandard assets - Other assets.
3. A review of the proposed planning data elements showed many of the deficiencies to remain after implementation of the planning actions. This is analogous to the assumption that the facility requirements are overstated by a like amount. Follow-on research should recompute the deficiencies per BFR based on the reduced amount of requirements.

4. A lag effect exists in that the data from the two reports address different time periods. The FPD determines future requirements in the 5-8 year advanced time frame, while the BASEREP assesses the ability of the assets to meet mission requirements during the current fiscal year. Follow on research should conduct a base by base review and factor out those items which address different time periods.
5. Finally, the data should be recomputed and reanalyzed based on combinations of the above recommendations.

APPENDIX A
SAMPLE FACILITIES REQUIREMENTS PLAN SUMMARY

This appendix contains an excerpt from a typical Facilities Requirements Plan Summary Report to familiarize the reader with its format. The facilities requirements and deficiencies data were taken directly from the respective columns. The proposed planning data column was not used in this study.

FACSO RPT SYM/NO. 11015/R2001R01

F A C I L I T I E S R E Q U I R E M E N T S P L A N S U M M A R Y

ACTIVITY UIC. ACTIVITY NAME. 10 MAR 87

CCN	CATEGORY CODE DESCRIPTION	UM	BASIC FACILITY REQUIREMENT	ASSETS ADEQUATE SUBSTNRD INADEQTE OTHER	A S I O	EXISTING QUANTITY SURPLUS+ DEFICIENT-	PROPOSED QUANTITY SURPLUS+ DEFICIENT-
111-10	RUNWAY/FIXED W	SY	368000	228330 177778 21670	A S I	59778 + 139670 -	13670 + 9000 -
111-20	HLCPTR LDG PAD	SY	6600			6600 -	
112-10	TAXIWAY	SY	491467	341879 27181 53606	A S I	149588 -	8192 + 45414 -
113-20	ACFT PRKG APRN	SY	713203	248440 251587	A S	464763 -	35315 +
113-40	ACFT ACC APRN	SY	35980	31931	A	4049 -	2142 +
116-10	ACFT W/RCK PV	SY	6640	6237	A	403 -	3806 +
116-15	ACFT RINSE FAC	SY	1820	2910	A	1090 +	
116-20	COMPASS CAL PAD	SY	1600	4022 4021	A S	6443 +	2422 +
116-35	ARM & DEARM PAD	SY	3910			3910 -	
116-55	ORD HNDL PAD	SY	9800	3333	I	9800 -	3333 +
121-10	ACFT DIR FU STA	GM	1650	75	S	1650 -	
121-20	ACFT TRK FU FAC	GM	2400	2400	A		
122-10	MARINE FUEL FAC	GM	3330	10000	A	6670 +	6671 +
122-20	SM/CFT FUEL STA	GM	100			100 -	
123-10	FILLING STATION	OL	6	4	A	2 -	
123-15	FILLING STN BLD	SF	72	250	A	178 +	178 +
124-30	ACFT R/FUEL ST	GA	3781000	3348836 12600	A I	432164 -	12600 +

APPENDIX B
BASEREP MISSION CATEGORIES

The following is a list of the BASEREP mission categories as defined in the pertinent instruction: [Ref. 3: pp. 14-18].

A. Aviation Operations
B. Fleet Communication Operations
C. Port Operations
D. Special Base Operations
E. Training Services
F. Aircraft Maintenance
G. Ship Repair Services
H. Electronic/Operational Systems Engineering/Logistics
I. Research, Development, Test and Evaluation
J. POL Products and Services
K. Weapons Systems Services
L. Medical/Dental Services
M. Bachelor Housing/ Messing
N. Personal Services
O. Family Housing Services
P. Utility Operations
Q. Administrative Services
R. Public Works Services
S. Security Services
T. Fire Protection Services
U. Base Transportation
V. Base Communication
W. Supply Services

APPENDIX C
BASEREP READINESS RATINGS

The BASEREP readiness ratings are defined as follows: [Ref. 3: p. 2]

- (1) - The base asset has fully met all demands placed upon it in the mission category throughout the reporting period.
- (2) - The base asset has substantially met all demands of the mission category throughout the reporting period with only minor difficulty.
- (3) - The base asset has only marginally met the demands of the mission category throughout the reporting period with major difficulty.
- (4) - The base asset has not met the vital demands of the mission category.

APPENDIX D
SAMPLE SHORE BASE READINESS REPORT (BASEREP)

This appendix contains a sample BASEREP which was typical of the reports used in this study. The facility quantity readiness ratings provided in page 1 of the sample were compared to the facility deficiency data obtained from the FRP summary report to test the consistency of the information provided.

SHORE BASE READINESS REPORT (BASEREP)

(As of 30 June)

UIC NUMBER:	REPORT DATE: 08 August 1986	
ACTIVITY TITLE:	POC:	TEL NO.:

PART I

MISSION CATEGORIES	ASSET CATEGORIES				
	PERSONNEL	FACILITIES		MAJOR EQUIPMENT	
		QUANTITY	CONDITION	QUANTITY	CONDITION
A Aviation Operations (HELO PAD)		1	1		
B Fleet Communication Operations					
C Port Operations					
D Special Base Operations					
E Training Services					
F Aircraft Maintenance					
G Ship Repair Services					
H Electronic/Operational Sys Engr/Logistics					
I RDT&E					
J POL Products/Services					
K Weapons Systems Services					
L Medical/Dental Services		2	2		
M Bachelor Housing/Messing	3	2	3	2	2
N Personal Services		2	2		
O Family Housing Services (NOTE 1)					
P Utility Operations (NOTE 1)					
Q Administrative Services					
R Public Works Services (NOTE 1&2)	2	2	2		
S Security Services	3	3	3	3	3
T Fire Protection (NOTE 3)		1	2		
U Base Transportation	2	2	2	1	1
V Base Communications (NOTE 4)	2	2	2	1	1
W Supply Services	2	2	2	2	2

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1- These are provided by PWC San Diego. No plant account utilized in performance of these services is held by this activity, therefore quality and condition is not reported and personnel not rated.
2- (See Note 1) Personnel function in managerial liaison with and oversee work by PWC.
3- Personnel provided by NAS North Island Fire Department.
4- Personnel provided by PWC San Diego.

Enclosure (3)

SHOREBASE READINESS REPORT (Part II: Narrative Explanation)	UIC No :	Report Date: 08 August 1986	
	Activity Title:	POC:	TEL NO :

BACHELOR HOUSING- PERSONNEL: In accordance with OPNAVINST 11103.3, UPH Complex at this facility should have a manpower complement of 28 military personnel; personnel gap continues to be bridged with transients, prospective school inputs, personnel awaiting seperation/reassignment, etc.

BACHLOR HOUSING - FACILITIES - CONDITION: BEQ'S 135 and 136 are WWII era wood frame structures which had to be reactivated with only essential repairs. BEQ 24 requires extensive repairs as does BEQ 28. Neither building programmed for other than cosmetic, interim repairs due to impending demolition under MCON Project P-600, replacement hospital complex.

SECURITY SERVICES - PERSONNEL: Internal zero base study indicates need for 75 military billets to provide stable, trained force of personnel. Being addressed through proposed change to existing MPA. Additional security staffing requirements are mandated by a substantial increase in area of responsibility, i.e., 1.2 million square feet replacement medical facility.

FACILITIES - CONDITION: Perimeter lighting inadequate; fencing inadequate due to holes in fence and in places non-existent.

SUPPLY SERVICES - FACILITIES QUANITY: There are 11 buildings assigned for storage of equipment and supplies. These buildings are small, and not located within close proximity to each other. In addition these do not have adequate space to allow the expansion of the In-house Supply System. In regard to disposal and excess items, they must be stored outside because of lack of storage space.

SUPPLY SERVICES - FACILITY CONDITION: Seven of 11 Supply Warehouses are quonset huts or buildings constructed of wood. These buildings are rusting and the wood is deteriorating. These buildings would require extensive repair during the next several years if the move to the new facility were not planned. Temporary repairs are made to maintain weather integrity and security of the stored items.

APPENDIX E
ACTIVITY LIST

The following is a list of the naval shore activities which were selected as subjects for this study:

1. Naval Submarine Base, Bangor, Washington
2. Naval Supply Center, Oakland, California
3. Naval Supply Center, Puget Sound, Washington
4. Naval Construction Battalion Center, Port Hueneme, California
5. Naval Training Center, San Diego, California
6. Naval Hospital, Camp Pendleton, California
7. Naval Hospital, San Diego, California
8. Naval Hospital, Bremerton, Washington
9. Naval Station, Treasure Island, California
10. Naval Air Facility, El Centro, California
11. Naval Air Station, Miramar, California
12. Naval Air Station, Adak, Alaska
13. Naval Air Station, Fallon, Nevada
14. Naval Air Station, Whidbey Island, Washington
15. Naval Air Station, Moffet Field, California
16. Naval Station, Seattle, Washington
17. Naval Air Station, Alameda, California
18. Naval Air Station, North Island, California
19. Naval Station, San Diego, California
20. Naval Station, Mare Island, California

APPENDIX F
BASEREP MISSIONS AND CATEGORY CODE RELATIONSHIPS

The following relationships were obtained from [Ref. 5: pp. 52-53].

TABLE 7

MISSION AND CATEGORY CODE RELATIONSHIPS

MISSION CATEGORY	CATEGORY CODE
AVIATION OPS	111-113, 116, 121, 133, 134, 136 141, 142, 149
FLEET COMM	131, 132, 135 (LESS 131-40, 131-60, 132-50, 132-55, 135-20
PORT OPS	122, 151-156, 159, 161-165, 169
SP BASE OPS	137, 138, 143, 148
TRAINING	171, 179
ACFT MAINT	211, 221
SHIP MAINT	213, 223
ELEX/LOG	217, 227
RDTE	310-321, 371, 390
POL SVCS	124-126, 411
WPNS SVC	212, 215, 216, 218, 222, 225, 226, 228, 421, 423-425
MED/DENT	510-550
UPH/MESS	721-725, (LESS 721-40)
PERS SVCS	730-760 (LESS 730-10,11,12,20,25,76)
FAM HSNG	711-714
UTILITIES	811-832, 834-842, 844, 845, 890, (LESS 812-40)
ADMIN	610 (LESS 610-30, 610-40), 620, 690 (LESS 690-15)
PUB WRKS	219, 229, 833, 871
SECURITY	872, 610-30, 610-40, 690-15, 721-40, 730-(15,20,25,76), 812-40, 860-20
FIRE PROT	843, 880, 730-(10,11,12)
BASE TRNS	123, 214, 224, 852, 852,860,(LESS 860-20)
BASE COMM	131-40, 131-60, 132-50, 135-20
SUPPLY SVCS	412, 431, 441, 451

APPENDIX G
DATA RESTRUCTURED ALONG BASEREP MISSION CATEGORY

This appendix contains the data after it was restructured along the BASEREP mission categories. The readiness ratings came from the BASEREP. The deficiencies and requirements were obtained from the respective FRP summary reports.

Mission categories which could not be reconciled due to incompatible or insufficient data are identified with the letter "I" in the respective column. Blanks indicate no data was listed for that mission category. For the reasons discussed above, these categories will be deleted from the ANOVA tests.

TABLE 8

RESTRUCTURED DATA FOR ACTIVITY #1

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	3	I	I	I
FLT COMS	3	1580	2218	71.2
PORT OPS	3	I	I	I
SPEC OPS	3	16915	28120	60.2
TRAINING	3	2950	5900	50.0
ACFT MNT	2	93048	182731	50.9
SHIP MNT	4	4940	4940	100.0
ELEX/LOG	3	4646	7420	62.6
RDTE	---	---	---	---
POL SVCS	3	I	I	43.8
WPN SVCS	3	36106	51950	69.5
MED/DENT	2	1138	1138	100.0
UPH/MESS	3	I	I	I
PERS SVC	2	159484	332600	48.0
FAM HSNG	3	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	2	17917	45021	39.8
PUB WRKS	2	I	I	I
SECURITY	2	3920	4070	96.3
FIR PROT	3	I	I	I
BASE TRN	2	I	I	I
BASE COM	2	2204	2204	100.0
SUP SVCS	3	99926	253932	39.4

TABLE 9

RESTRUCTURED DATA FOR ACTIVITY #2

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	2	I	I	57.0
FLT COMS	1	1441	5516	26.1
PORT OPS	---	---	---	---
SPEC OPS	5	70670	90100	78.5
TRAINING	5	I	I	I
ACFT MNT	2	388251	510907	76.0
SHIP MNT	---	---	---	---
ELEX/LOG	5	1725	11725	14.7
RDTE	---	---	---	---
POL SVCS	3	I	I	I
MED/DENT	---	---	---	---
WPNS SVC	2	239804	281180	85.3
UPH/MESS	3	I	I	38.0
PERS SVC	3	118576	219803	53.9
FAM HSNG	3	(NOT LISTED IN FPD)		
UTILITY	3	(NOT LISTED IN FPD)		
ADMIN	2	36	16798	0.2
PUB WRKS	3	20508	28995	70.7
SECURITY	3	I	I	I
FIR PROT	3	3600	3600	100.0
BASE TRN	3	I	I	I
BASE COM	2	4561	5851	78.0
SUP SVCS	3	20076	101473	19.8

TABLE 10

RESTRUCTURED DATA FOR ACTIVITY #3

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	19800	21530	92.0
FLT COMS	5	4060	6193	65.6
PORT OPS	4	I	I	I
SPEC OPS	5	49517	50122	98.8
TRAINING	5	1500	7178	20.9
ACFT MNT	---	---	---	---
SHIP MNT	5	138104	138104	100.0
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	5	I	I	100.0
WPN SVCS	2	29643	29643	100.0
MED/DENT	5	I	I	100.0
UPH/MESS	2	I	I	61.4
PERS SVC	1	497589	673173	73.9
FAM HSNG	2	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	2	39800	101727	39.1
PUB WRKS	2	15000	41544	36.1
SECURITY	2	I	I	I
FIR PROT	2	4800	8400	57.1
BASE TRN	2	I	I	I
BASE COM	5	2100	6725	31.2
SUP SVCS	1	124700	124700	100.0

TABLE 11

RESTRUCTURED DATA FOR ACTIVITY #4

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	2	I	I	I
FLT COMS	5	832	1365	61.0
PORT OPS	2	I	I	I
SPEC OPS	5	14186	21045	67.4
TRAINING	5	23942	36350	65.9
ACFT MNT	1	184124	224520	82.0
SHIP MNT	---	---	---	---
ELEX/LOG	5	2539	5300	47.9
RDTE	---	---	---	---
POL SVCS	1	I	I	98.8
WPN SVCS	2	121801	147805	81.9
MED/DENT	---	---	---	---
UPH/MESS	2	I	I	100.0
PERS SVC	2	599702	784653	76.4
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	132752	184691	71.9
PUB WRKS	2	12100	12100	100.0
SECURITY	1	9421	9538	98.8
FIR PROT	2	6200	6200	100.0
BASE TRN	5	I	I	I
BASE COM	3	4950	4950	100.0
SUP SVCS	1	128558	189455	67.9

TABLE 12

RESTRUCTURED DATA FOR ACTIVITY #5

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	---	---	---	---
FLT COMS	---	---	---	---
PORT OPS	---	---	---	---
SPEC OPS	5	4500	4500	100.0
TRAINING	2	595882	1122076	53.1
ACFT MNT	---	---	---	---
SHIP MNT	---	---	---	---
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	---	---	---	---
WPN SVCS	2	I	I	I
MED/DENT	---	---	---	---
UPH/MESS	2	I	I	32.3
PERS SVC	2	497216	642794	77.4
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	10150	116941	8.7
PUB WRKS	2	6000	6000	100.0
SECURITY	2	0	2100	0.0
FIR PROT	5	3600	3600	100.0
BASE TRN	1	1832229	3127140	58.6
BASE COM	---	---	---	---
SUP SVCS	2	142580	146260	97.5

TABLE 13

RESTRUCTURED DATA FOR ACTIVITY #6

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	15488	15488	100.0
FLT COMS	5	4000	4000	100.0
PORT OPS	1	I	I	I
SPEC OPS	5	800	5300	15.1
TRAINING	3	22620	24380	92.8
ACFT MNT	---	---	---	---
SHIP MNT	5	36000	36000	100.0
ELEX/LOG	5	10600	10600	100.0
RDTE	---	---	---	---
POL SVCS	1	I	I	6.7
WPNS SVC	5	261030	281000	92.9
MED/DENT	---	---	---	---
UPH/MESS	3	I	I	90.4
PERS SVC	3	546242	638001	85.6
FAM HSNG	3	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	3	269105	279500	96.3
PUB WRKS	4	44000	44000	100.0
SECURITY	3	8667	8850	97.9
FIR PROT	2	10000	10000	100.0
BASE TRN	1	I	I	I
BASE COM	3	6450	6450	100.0
SUP SVCS	2	5991446	6052986	99.0

TABLE 14

RESTRUCTURED DATA FOR ACTIVITY #7

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	1	0	9900	0.0
FLT COMS	---	---	---	---
PORT OPS	---	---	---	---
SPEC OPS	5	2000	2000	100.0
TRAINING	---	---	---	---
ACFT MNT	---	---	---	---
SHIP MNT	---	---	---	---
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	---	---	---	---
WPN SVCS	---	---	---	---
MED/DENT	2	I	I	I
UPH/MESS	2	I	I	86.8
PERS SVC	2	255474	468935	54.5
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	0	2438	0.0
PUB WRKS	---	---	---	---
SECURITY	3	157	638	24.6
FIR PROT	1	0	3600	0.0
BASE TRN	2	I	I	I
BASE COM	2	I	I	I
SUP SVCS	2	4350	4350	100.0

TABLE 15

RESTRUCTURED DATA FOR ACTIVITY #8

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	0	9900	0.0
FLT COMS	---	---	---	---
PORT OPS	---	---	---	---
SPEC OPS	5	1400	1400	100.0
TRAINING	1	134	420	31.9
ACFT MNT	---	---	---	---
SHIP MNT	---	---	---	---
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	5	I	I	100.0
WPN SVCS	---	---	---	---
MED/DENT	1	I	I	I
UPH/MESS	1	I	I	16.9
PERS SVC	1	37095	48860	75.9
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	1	1000	0.1
PUB WRKS	1	12000	12000	100.0
SECURITY	1	I	I	I
FIR PROT	---	---	---	---
BASE TRN	1	I	I	I
BASE COM	---	---	---	---
SUP SVCS	2	32326	32326	100.0

TABLE 16

RESTRUCTURED DATA FOR ACTIVITY #9

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	---	---	---	---
FLT COMS	5	1609	4092	39.3
PORT OPS	1	I	I	2.7
SPEC OPS	5	0	23105	0.0
TRAINING	5	18374	18374	100.0
ACFT MNT	---	---	---	---
SHIP MNT	5	2646	2646	100.0
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	---	---	---	---
WPN SVCS	2	I	I	I
MED/DENT	2	I	I	I
UPH/MESS	3	I	I	37.3
PERS SVC	2	149092	475672	31.3
FAM HSNG	2	(NOT LISTED IN FPD)		
UTILITY	---	---	---	---
ADMIN	4	0	12838	0.0
PUB WRKS	2	0	8199	0.0
SECURITY	2	19225	19893	96.6
FIR PROT	3	11500	19900	57.8
BASE TRN	5	0	82924	0.0
BASE COM	2	0	4038	0.0
SUP SVCS	2	2610	26100	10.0

TABLE 17

RESTRUCTURED DATA FOR ACTIVITY #10

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	2	I	I	17.8
FLT COMS	2	0	4763	0.0
PORT OPS	---	---	---	---
SPEC OPS	5	11813	13413	88.1
TRAINING	3	102788	352789	29.1
ACFT MNT	1	457321	1087617	42.0
SHIP MNT	---	---	---	---
ELEX/LOG	5	5613	13849	40.5
RDTE	---	---	---	---
POL SVCS	2	I	I	9.0
WPN SVCS	2	140178	156137	89.8
MED/DENT	---	---	---	---
UPH/MESS	2	I	I	41.9
PERS SVCS	2	I	I	I
FAM HSNG	2	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	2	40017	131546	30.4
PUB WRKS	2	9007	49100	18.3
SECURITY	2	I	I	I
FIR PROT	5	4323	14400	30.0
BASE TRN	2	I	I	I
BASE COM	5	0	2500	0.0
SUP SVCS	2	25299	304417	8.3

TABLE 18

RESTRUCTURED DATA FOR ACTIVITY #11

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	0	3000	0.0
FLT COMS	5	500	6148	8.1
PORT OPS	2	I	I	I
SPEC OPS	5	81646	337960	24.6
TRAINING	5	I	I	I
ACFT MNT	---	---	---	---
SHIP MNT	---	---	---	---
ELEX/LOG	---	---	---	---
RDTE	5	903	903	100.0
POL SVCS	5	I	I	I
WPN SVCS	1	17289	41293	41.9
MED/DENT	5	0	15708	0.0
UPH/MESS	5	I	I	100.0
PERS SVC	2	1673517	2021842	82.8
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	167489	506715	33.1
PUB WRKS	2	82670	88636	93.2
SECURITY	2	3240	8243	39.3
FIR PROT	2	5516	11200	49.3
BASE TRN	5	11423	118895	9.6
BASE COM	2	2450	2450	100.0
SUP SVCS	3	4671336	11229758	41.6

TABLE 19

RESTRUCTURED DATA FOR ACTIVITY #12

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	1	4957537	7027181	70.6
FLT COMS	1	559	1027	54.4
PORT OPS	---	---	---	---
SPEC OPS	5	7546	7546	100.0
TRAINING	---	---	---	---
ACFT MNT	5	30996	74596	41.6
SHIP MNT	---	---	---	---
ELEX/LOG	5	1224	1224	100.0
RDTE	5	1248	1248	100.0
POL SVCS	2	I	I	1.4
WPN SVCS	3	25200	28845	87.4
MED/DENT	---	---	---	---
UPH/MESS	3	I	I	25.0
PERS SVCS	3	101598	131019	77.5
FAM HSNG	1	(NOT LISTED IN FPD)		
UTILITY	1	(NOT LISTED IN FPD)		
ADMIN	1	12420	14890	83.4
PUB WRKS	2	16750	17800	94.1
SECURITY	2	1150	1182	97.3
FIR PROT	1	I	I	I
BASE COM	5	1650	1650	100.0
BASE TRN	1	I	I	I
SUP SVCS	1	I	I	I

TABLE 20

RESTRUCTURED DATA FOR ACTIVITY #13

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	10565	23570	44.8
FLT COMS	5	2588	2588	100.0
PORT OPS	4	I	I	99.5
SPEC OPS	5	41401	46086	89.8
TRAINING	5	87302	137802	63.4
ACFT MNT	---	---	---	---
SHIP MNT	5	307014	307014	100.0
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	2	I	I	57.5
WPN SVCS	---	---	---	---
MED/DENT	---	---	---	---
UPH/MESS	3	I	I	34.9
PERS SVC	2	936892	1054890	88.8
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	29592	102192	29.0
PUB WRKS	2	I	I	I
SECURITY	3	118431	142368	83.2
FIR PROT	3	4800	12000	40.0
BASE TRN	5	34389	231070	14.9
BASE COM	5	2870	2870	100.0
SUP SVCS	3	188861	188861	100.0

TABLE 21

RESTRUCTURED DATA FOR ACTIVITY #14

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	0	13183	0.0
FLT COMS	5	0	445	0.0
PORT OPS	2	I	I	I
SPEC OPS	5	6925	18966	36.5
TRAINING	5	2620	16135	16.2
ACFT MNT	---	---	---	---
SHIP MNT	5	3040	3040	100.0
ELEX/LOG	5	1150	1150	100.0
RDTE	---	---	---	---
POL SVCS	1	I	I	0.1
WPN SVCS	1	18	6946	0.3
MED/DENT	---	---	---	---
UPH/MESS	1	I	I	52.3
PERS SVC	2	185898	498269	38.0
FAM HSNG	1	(NOT LISTED IN FPD)		
UTILITY	1	(NOT LISTED IN FPD)		
ADMIN	1	28226	206235	13.7
PUB WRKS	1	34373	116201	29.6
SECURITY	1	9572	13349	71.7
FIR PROT	1	1429	15474	9.2
BASE TRN	1	72	35520	0.2
BASE COM	1	200	200	100.0
SUP SVCS	1	13416	121826	11.0

TABLE 22

RESTRUCTURED DATA FOR ACTIVITY #15

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	---	---	---	---
FLT COMS	---	---	---	---
PORT OPS	2	I	I	I
SPEC OPS	5	1600	2560	62.5
TRAINING	---	---	---	---
ACFT MNT	---	---	---	---
SHIP MNT	2	I	I	I
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	5	I	I	47.5
WPN SVCS	---	---	---	---
MED/DENT	---	---	---	---
UPH/MESS	---	---	---	---
PERS SVC	5	208	450	46.2
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	7665	125748	6.1
PUB WRKS	2	1400	13360	10.5
SECURITY	2	0	100	0.0
FIRE PROT	2	0	3000	0.0
BASE TRN	5	I	I	I
BASE COM	---	---	---	---
SUP SVCS	2	1132226	1701568	66.5

TABLE 23

RESTRUCTURED DATA FOR ACTIVITY #16

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	1	0	9900	0.0
FLT COM	---	---	---	---
PORT OPS	---	---	---	---
SPEC OPS	5	2800	2836	98.7
TRAINING	---	---	---	---
ACFT MNT	---	---	---	---
SHIP MNT	---	---	---	---
ELEX/LOG	---	---	---	---
RDTE	---	---	---	---
POL SVCS	---	---	---	---
WPN SVCS	---	---	---	---
MED/DENT	2	I	I	I
UPH/MESS	1	I	I	44.0
PERS SVC	1	I	I	I
FAM HSNG	---	---	---	---
UTILITY	1	(NOT LISTED IN FPD)		
ADMIN	1	I	I	I
PUB WRKS	2	8075	8075	100.0
SECURITY	2	I	I	I
FIR PROT	1	I	I	I
BASE TRN	1	18765	18765	100.0
BASE COM	1	I	I	I
SUP SVCS	1	2309	7535	30.6

TABLE 24

RESTRUCTURED DATA FOR ACTIVITY #17

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	5	1032	1032	100.0
FLT COMS	---	---	---	---
PORT OPS	2	I	I	I
SPEC OPS	5	18826	18826	100.0
TRAINING	5	43600	51690	84.3
ACFT MNT	---	---	---	---
SHIP MNT	5	28029	28029	100.0
ELEX/LOG	5	6112	6112	100.0
RDTE	---	---	---	---
POL SVCS	---	---	---	---
WPN SVCS	5	240	240	100.0
MED/DENT	---	---	---	---
UPH/MESS	4	I	I	68.2
PERS SVC	4	1387553	1744385	75.0
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	102744	129395	79.4
PUB WRKS	5	8827	11820	74.7
SECURITY	3	173844	176690	99.0
FIR PROT	5	8182	13592	60.2
BASE TRN	5	68164	3343892	2.0
BASE COM	---	---	---	---
SUP SVCS	2	447383	455399	98.2

TABLE 25

RESTRUCTURED DATA FOR ACTIVITY #18

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	3	I	I	I
FLT COMS	5	65	2201	3.0
PORT OPS	5	I	I	I
SPEC OPS	5	I	I	I
TRAINING	2	I	I	I
ACFT MNT	2	I	I	I
SHIP MNT	---	---	---	---
ELEX/LOG	5	593	1503	39.5
RDTE	---	---	---	---
POL SVCS	2	I	I	0.0
WPN SVCS	3	55888	100770	55.5
MED/DENT	5	0	66	0.0
UPH/MESS	2	I	I	20.1
PERS SVC	3	217501	463085	47.0
FAM HSNG	3	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	2	84753	137953	61.4
PUB WRKS	1	0	37365	0.0
SECURITY	3	7845	15224	51.5
FIR PROT	3	0	4800	0.0
BASE TRN	1	I	I	I
BASE COM	3	1003	3403	29.5
SUP SVCS	2	33925	203909	16.6

TABLE 26

RESTRUCTURED DATA FOR ACTIVITY #19

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	2	I	I	I
FLT COMS	5	4988	7295	68.4
PORT OPS	5	I	I	100.0
SPEC OPS	5	20134	26612	75.7
TRAINING	5	I	I	I
ACFT MNT	5	I	I	91.0
SHIP MNT	---	---	---	---
ELEX/LOG	5	4120	4120	100.0
RDTE	---	---	---	---
POL SVCS	2	I	I	I
WPN SVCS	2	63354	73524	86.2
MED/DENT	---	---	---	---
UPH/MESS	3	I	I	36.2
PERS SVC	2	I	I	I
FAM HSNG	4	(NOT LISTED IN FPD)		
UTILITY	2	(NOT LISTED IN FPD)		
ADMIN	2	4063	43465	9.4
PUB WRKS	2	1930	25180	7.7
SECURITY	5	2786	2786	100.0
FIR PROT	4	I	I	I
BASE TRN	2	I	I	I
BASE COM	2	1612	3470	46.5
SUP SVCS	2	8453	164984	5.1

TABLE 27

RESTRUCTURED DATA FOR ACTIVITY #20

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	2	I	I	I
FLT COMS	5	2955	10234	28.9
PORT OPS	3	I	I	I
SPEC OPS	5	I	I	I
TRAINING	5	I	I	I
ACFT MNT	3	I	I	I
SHIP MNT	5	958	10598	9.0
ELEX/LOG	5	6130	6130	100.0
RDTE	5	1348	2500	53.9
POL SVCS	2	I	I	31.2
WPN SVCS	3	221688	337600	65.7
MED/DENT	5	362	2250	16.1
UPH/MESS	3	I	I	57.3
PERS SVC	3	936940	1196807	78.3
FAM HSNG	---	---	---	---
UTILITY	---	---	---	---
ADMIN	2	3641	264551	1.4
PUB WRKS	5	6102	24830	24.6
SECURITY	4	16918	17493	96.7
FIR PROT	2	52159	60000	86.9
BASE TRN	2	I	I	I
BASE COM	3	4950	4950	100.0
SUP SVCS	3	601072	1372989	43.8

APPENDIX H
ANOVA TEST DATA BASE

This appendix contains the data used in the ANOVA tests, which are the results after the excluded mission categories discussed in Chapter IV and Appendix G were removed.

TABLE 28

ANOVA TEST DATA FOR ACTIVITY #1

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
ACFT MNT	2	93048	182731	50.9
MED/DENT	2	1138	1138	100.0
PERS SVC	2	159484	332600	48.0
ADMIN	2	17917	45021	39.8
SECURITY	2	3920	4070	96.3
BASE COM	2	2204	2204	100.0
FLT COMS	3	1580	2218	71.2
SPEC OPS	3	16915	28120	60.2
TRAINING	3	2950	5900	50.0
ELEX/LOG	3	4646	7420	62.6
POL SVCS	3	---	---	43.8
WPN SVCS	3	36106	51960	69.5
SUP SVCS	3	99926	253932	39.4
SHIP MNT	4	4940	4940	100.0

TABLE 29

ANOVA TEST DATA FOR ACTIVITY #2

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
FLT COMS	1	1441	5516	26.1
AVIATION	2	---	---	57.0
ACFT MNT	2	388251	510907	76.0
WPN SVCS	2	239804	281180	85.3
ADMIN	2	36	16798	0.2
BASE COM	2	4561	5851	78.0
POL SVCS	3	---	---	27.0
UPH/MESS	3	---	---	38.0
PERS SVC	3	118576	219803	53.9
PUB WRKS	3	20508	28995	70.7
FIR PROT	3	3600	3600	100.0
SUP SVCS	3	20076	101473	19.8
SPEC OPS	5	70670	90010	78.5
ELEX/LOG	5	1725	11725	14.7

TABLE 30

ANOVA TEST DATA FOR ACTIVITY #3

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
PERS SVCS	1	497589	673173	73.9
SUP SVCS	1	124700	124700	100.0
WPN SVCS	2	29643	29643	100.0
UPH/MESS	2	---	---	61.4
ADMIN	2	39800	101727	39.1
PUB WRKS	2	15000	41544	36.1
FIR PROT	2	4800	8400	57.1
AVIATION	5	19800	21530	92.0
FLT COMS	5	4060	6193	65.6
SPEC OPS	5	49517	50112	98.8
TRAINING	5	1500	7178	20.9
SHIP MNT	5	138104	138104	100.0
POL SVCS	5	---	---	100.0
MED/DENT	5	---	---	100.0
BASE COM	5	2100	6725	31.2

TABLE 31

ANOVA TEST DATA FOR ACTIVITY #4

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
ACFT MNT	1	184124	224520	82.0
POL SVCS	1	---	---	98.8
SECURITY	1	9421	9538	98.8
SUP SVCS	1	128558	189455	67.9
WPN SVCS	2	121081	147805	81.9
UPH/MESS	2	---	---	100.0
PERS SVCS	2	599702	784653	76.4
ADMIN	2	137752	184691	71.9
PUB WRKS	2	12100	12100	100.0
FIR PROT	2	6200	6200	100.0
BASE COM	3	4950	4950	100.0
FLT COMS	5	832	1365	61.0
SPEC OPS	5	14186	21045	67.4
TRAINING	5	23942	36350	65.9
ELEX/LOG	5	2539	5300	47.9

TABLE 32

ANOVA TEST DATA FOR ACTIVITY #5

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
BASE TRN	1	1832229	3127140	58.6
TRAINING	2	595882	1122076	53.1
UPH/MESS	2	---	---	32.3
PERS SVC	2	497216	642794	77.4
ADMIN	2	10150	116941	8.7
PUB WRKS	2	6000	6000	100.0
SECURITY	2	0	2100	0.0
SUP SVCS	2	142580	146260	97.5
SPEC OPS	5	4500	4500	100.0
FIR PROT	5	3600	3600	100.0

TABLE 33

ANOVA TEST DATA FOR ACTIVITY #6

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
POL SVCS	1	---	---	6.7
FIR PROT	2	10000	10000	100.0
SUP SVCS	2	5991446	6052986	99.0
TRAINING	3	22620	24380	92.8
UPH/MESS	3	---	---	90.4
PERS SVC	3	546242	638001	85.6
ADMIN	3	269105	279500	96.3
SECURITY	3	8667	8850	97.9
BASE COM	3	6450	6450	100.0
PUB WRKS	4	44000	44000	100.0
AVIATION	5	15488	15488	100.0
FLT COMS	5	4000	4000	100.0
SPEC OPS	5	800	5300	15.1
SHIP MNT	5	36000	36000	100.0
ELEX/LOG	5	10600	10600	100.0
WPN SVC	5	261030	281000	92.9

TABLE 34

ANOVA TEST DATA FOR ACTIVITY #7

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	1	0	9900	0.0
FIR PROT	1	0	3600	0.0
UPH/MESS	2	---	---	86.8
PERS SVC	2	255474	468935	54.5
ADMIN	2	0	2438	0.0
SUP SVCS	2	4350	4350	100.0
SECURITY	3	157	640	24.6
SPEC OPS	5	2000	2000	100.0

TABLE 35

ANOVA TEST DATA FOR ACTIVITY #8

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
TRAINING	1	134	420	31.9
UPH/MESS	1	---	---	16.9
PERS SVC	1	37095	48860	75.9
PUB WRKS	1	12000	12000	100.0
ADMIN	2	1	1000	0.1
SUP SVCS	2	32326	32326	100.0
AVIATION	5	0	9900	0.0
SPEC OPS	5	1400	1400	100.0
POL SVCS	5	---	---	100.0

TABLE 36

ANOVA TEST DATA FOR ACTIVITY #9

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
PORT OPS	1	---	---	2.7
PERS SVC	2	149092	475672	31.3
PUB WRKS	2	0	8199	0.0
SECURITY	2	19225	19893	96.6
BASE COM	2	0	4038	0.0
SUP SVCS	2	2610	26100	10.0
UPH/MESS	3	---	---	37.3
FIR PROT	3	11500	19900	57.8
ADMIN	4	0	12838	0.0
FLT COMS	5	1609	4092	39.3
SPEC OPS	5	0	23105	0.0
SHIP MNT	5	2646	2646	100.0
TRAINING	5	18374	18374	100.0
BASE TRN	5	0	82924	0.0

TABLE 37

ANOVA TEST DATA FOR ACTIVITY #10

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
ACFT MNT	1	457321	1087617	42.0
AVIATION	2	---	---	17.8
FLT COMS	2	0	4763	0.0
POL SVCS	2	---	---	9.0
WPN SVCS	2	140178	156137	89.8
UPH/MESS	2	---	---	41.9
ADMIN	2	40017	131546	30.4
PUB WRKS	2	9007	49100	18.3
SUP SVCS	2	25299	304417	8.3
TRAINING	3	102788	352789	29.1
BASE COM	5	0	2500	0.0
SPEC OPS	5	11813	13413	88.1
ELEX/LOG	5	5613	13849	40.5
FIR PROT	5	4323	14400	30.0

TABLE 38

ANOVA TEST DATA FOR ACTIVITY #11

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
WPN SVCS	1	17289	41293	41.9
PERS SVC	2	1673517	2021842	82.8
ADMIN	2	167489	506715	33.1
PUB WRKS	2	82670	88636	93.2
SECURITY	2	3240	8243	39.3
FIR PROT	2	5516	11200	49.3
BASE COM	2	2450	2450	100.0
SUP SVCS	3	4671336	11229758	41.6
AVIATION	5	0	3000	0.0
FLT COMS	5	500	6148	8.1
SPEC OPS	5	81646	337960	24.6
RDTE	5	903	903	100.0
MED/DENT	5	0	15708	0.0
UPH/MESS	5	---	---	100.0
BASE TRN	5	11423	118895	9.6

TABLE 39

ANOVA TEST DATA FOR ACTIVITY #12

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	1	4957537	7027181	70.6
FLT COMS	1	559	1027	54.4
ADMIN	1	12420	14890	83.4
POL SVCS	2	---	---	1.4
PUB WRKS	2	16750	17800	94.1
SECURITY	2	1150	1182	97.3
WPN SVCS	3	25200	28845	87.4
UPH/MESS	3	---	---	25.0
PERS SVC	3	101598	131019	77.5
BASE COM	5	1650	1650	100.0
ACFT MNT	5	30996	74596	41.6
ELEX/LOG	5	1224	1224	100.0
RDTE	5	1248	1248	100.0
SPEC OPS	5	7546	7546	100.0

TABLE 40

ANOVA TEST DATA FOR ACTIVITY #13

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
POL SVCS	2	---	---	57.5
PERS SVC	2	936892	1054890	88.8
ADMIN	2	29592	102192	29.0
UPH/MESS	3	---	---	34.9
SECURITY	3	118431	142368	83.2
FIR PROT	3	4800	12000	40.0
SUP SVCS	3	188861	188861	100.0
PORT OPS	4	---	---	99.5
AVIATION	5	10565	23570	44.8
BASE TRN	5	34389	231070	14.9
FLT COMS	5	2588	2588	100.0
BASE COM	5	2870	2870	100.0
SPEC OPS	5	41401	46086	89.8
TRAINING	5	87302	137802	63.4
SHIP MNT	5	307014	307014	100.0

TABLE 41

ANOVA TEST DATA FOR ACTIVITY #14

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
POL SVCS	1	---	---	0.1
WPN SVCS	1	18	6946	0.3
UPH/MESS	1	---	---	52.3
ADMIN	1	28226	206235	13.7
PUB WRKS	1	34373	116201	29.6
SECURITY	1	9572	13349	71.7
FIR PROT	1	1429	15474	9.2
BASE TRN	1	72	35520	0.2
BASE COM	1	200	200	100.0
SUP SVCS	1	13416	121826	11.0
PERS SVC	2	185898	498269	38.0
AVIATION	5	0	13183	0.0
FLT COMS	5	0	445	0.0
SPEC OPS	5	6925	18966	36.5
TRAINING	5	2620	16135	16.2
SHIP MNT	5	3040	3040	100.0
ELEX/LOG	5	1150	1150	100.0

TABLE 42

ANOVA TEST DATA FOR ACTIVITY #15

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
ADMIN	2	7665	125748	6.1
PUB WRKS	2	1400	13360	10.5
SECURITY	2	0	100	0.0
FIR PROT	2	0	3000	0.0
SUP SVCS	2	1132226	1701568	66.5
POL SVCS	5	---	---	47.5
SPEC OPS	5	1600	2560	62.5
PERS SVC	5	208	450	46.2

TABLE 43

ANOVA TEST DATA FOR ACTIVITY #16

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
AVIATION	1	0	9900	0.0
UPH/MESS	1	---	---	44.0
BASE TRN	1	18765	18765	100.0
SUP SVCS	1	2309	7535	30.6
PUB WRKS	2	8075	8075	100.0
SPEC OPS	5	2800	2836	98.7

TABLE 44

ANOVA TEST DATA FOR ACTIVITY #17

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
ADMIN	2	102774	129395	79.4
SUP SVCS	2	447383	455399	98.2
SECURITY	3	173844	176690	99.0
UPH/MESS	4	---	---	68.2
PERS SVC	4	1387553	1744385	75.0
POL SVCS	5	---	---	100.0
AVIATION	5	1032	1032	100.0
SPEC OPS	5	18826	18826	100.0
TRAINING	5	43600	51690	84.3
SHIP MNT	5	28029	28029	100.0
ELEX/LOG	5	6112	6112	100.0
WPN sVCS	5	240	240	100.0
FIR PROT	5	8182	13592	60.2
BASE TRN	5	68164	3343892	2.0
PUB WRKS	5	8827	11820	74.7

TABLE 45

ANOVA TEST DATA FOR ACTIVITY #18

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
PUB WRKS	1	0	37365	0.0
POL SVCS	2	---	---	0.0
UPH/MESS	2	---	---	20.1
ADMIN	2	84753	137953	61.4
SUP SVCS	2	33925	203909	16.6
WPN SVCS	3	55888	100770	55.5
PERS SVCS	3	217501	463085	47.0
SECURITY	3	7845	15224	51.5
FIRE PROT	3	0	4800	0.0
BASE COM	3	1003	3403	29.5
FLT COMS	5	65	2201	3.0
MED/DENT	5	0	66	0.0
ELEX/LOG	5	593	1503	39.5

TABLE 46

ANOVA TEST DATA FOR ACTIVITY #19

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
WPN SVCS	2	63354	73524	86.2
ADMIN	2	4063	43465	9.4
PUB WRKS	2	1930	25180	7.7
BASE COM	2	1612	3470	46.5
SUP SVCS	2	8453	164989	5.1
UPH/MESS	3	---	---	36.2
FLT COMS	5	4988	7295	68.4
PORT OPS	5	---	---	100.0
SPEC OPS	5	20134	26612	75.7
ACFT MNT	5	---	---	91.0
ELEX/LOG	5	4120	4120	100.0
SECURITY	5	2786	2786	100.0

TABLE 47

ANOVA TEST DATA FOR ACTIVITY #20

MISSION CATEGORY	READINESS RATING	DEFICIENCY	BASIC REQUIREMENT	%DEF /BFR
POL SVCS	2	---	---	31.2
ADMIN	2	3641	264551	1.4
FIR PROT	2	52159	60000	86.9
WPN SVCS	3	221688	337600	65.7
UPH/MESS	3	---	---	57.3
PERS SVCS	3	936940	1196807	78.3
BASE COM	3	4950	4950	100.0
SUP SVCS	3	601072	1372989	43.8
SECURITY	4	16918	17493	96.7
FLT COMS	5	2955	10234	28.9
SHIP MNT	5	958	10598	9.0
ELEX/LOG	5	6130	6130	100.0
RDTE	5	1348	2500	53.9
MED/DENT	5	362	2250	16.1
PUB WRKS	5	6102	24830	24.6

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